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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/690,761      | 10/22/2003  | Steven W. Webb       | 128346-60701        | 5364             |

7590 09/25/2006  
James M. Singer  
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Pittsburgh, PA 15219

EXAMINER

ADDISU, SARA

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3722

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                    |  |
|------------------------------|--------------------------------------|------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/690,761 | <b>Applicant(s)</b><br>WEBB ET AL. |  |
|                              | <b>Examiner</b><br>Sara Addisu       | <b>Art Unit</b><br>3722            |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/22/03, 1/24/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

- The abstract of the disclosure is objected to because it is in claim format and contains legal phraseology, e.g. "comprising".. Correction is required. See MPEP § 608.01(b).

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2, recites "...deformation is partially irreversible". The disclosure does not clarify what Applicant considers to be "partially". The disclosure describes either reversible deformation or irreversible deformation but not "partially irreversible". For the purpose of this Office Action, Examiner is interpreting it as being irrever<sup>3</sup>able.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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2. Claims 1, 2 4-7, 11 and 17-20, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Kuroyama et al. (USP 5,183,362).

Kuroyama et al. teaches a tool insert having a cemented carbide insert body (1) and an abrasive tip (3) the abrasive tip and the insert body containing mating geometric features (i.e. tip 3 is attached to recess 2 of the insert body) ('362, figures 5 & 6). The tip and insert are assembled together by soldering/placing in an oven of high temperature (600- 800 degree Celsius) which of course irreversibly deforms the mating surfaces (this is equivalent to what is claimed in claim 1, i.e. mechanical forces derived from deformation of the mating geometrical features on the abrasive tip and / or the insert body) ('362, abstract, Col. 4, lines 30+ and Col. 5, lines 8-11).

3. Claims 1, 3, 9-16, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Murakami (USP 5,846,032).

Murakami teaches a tool insert (2) having a body (4) with plurality of elastic deformation sections (8) and an abrasive tip (5), wherein the abrasive tip and the insert body containing mating geometric features ('032, figure 1). The elastic deformation sections (8) allow the geometric features to be interlockable. Regarding claims 12 and 15, pressing the tip into section (8) secures the tip (i.e by press fitting/interference fit).

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Regarding claims 9, 10, 22 and 23, Murakami teaches the insert having a wedge portion ('032, figure 4).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8, 21 and 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroyama et al. (USP 5,183,362) in view of Kanada et al. (U.S. Pub # 2002/0190105).

Kuroyama et al. teaches a tool insert having an abrasive tip, as set forth in the above rejection.

However, Kuroyama et al. fails to teach the insert being coated.

Kanada et al. teaches an insert (1) having a coating layer formed on its surface via a physical vapor deposition method or a chemical vapor deposition method, comprising at least one element selected from the group consisting of elements belonging to groups IVa, Va, VIa in the periodic table and elements Al, Si, and B, or at least one compound selected from the group consisting of nitride, carbide, or oxide of at

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least one metal selected from this group, and their solid solutions ('105, page 4, paragraph 50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a coating to Kuroyama et al.'s insert, as taught by Kanada et al., for the purpose of improving the cutting performance of the insert ('105, page 4, right column, lines 8-10).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Addisu at (571) 272-6082. The examiner can normally be reached on 8:30 am - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica Carter can be reached on (571) 272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SA  
9/16/06

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